

Item	Designator	Description	Manufacturer	PartNumber	Quantity
1	C1, C15, C22	CAP, CERM, 2.2uF, 100V, +/-10%, X7R, 1210	MuRata	GRM32ER72A225KA35L	3
2	C2	CAP, CERM, 0.47uF, 100V, +/-10%, X7R, 1206	MuRata	GRM31MR72A474KA35L	1
3	C3, C34, C35	CAP, CERM, 2.2uF, 25V, +/-10%, X7R, 0805	MuRata	GRM21BR71E225KA73L	3
4	C4, C33	CAP, CERM, 4.7uF, 50V, +/-10%, X7R, 1206	MuRata	GRM31CR71H475KA12L	2
5	C5, C6, C16, C23, C24, C28, C43, C66, C78	CAP, CERM, 4.7uF, 50V, +/-10%, X5R, 0805	TDK	C2012X5R1H475K125AB	9
6	C7, C67, C68, C71, C74, C77, C93	CAP, CERM, 1000pF, 2KV 10% X7R 1206	Johanson Dielectrics Inc	202R18W102KV4E	7
7	C8, C21	CAP, CERM, 0.01uF, 100V, +/-5%, X7R, 0603	AVX	06031C103JAT2A	2
8	C9, C11, C14, C17, C18, C25, C27, C29, C30, C32, C47, C48, C64, C65, C69, C70, C75, C76, C80, C81	CAP, CERM, 0.1uF, 50V, +/-10%, X7R, 0603	AVX	06035C104KAT2A	20
9	C10, C26	CAP, CERM, 3900pF, 50V, +/-10%, X7R, 0603	MuRata	GRM188R71H392KA01D	2
10	C12, C19	CAP, CERM, 10uF, 25V, +/-10%, X7R, 1206	MuRata	GRM31CR71E106KA12L	2
11	C13	CAP, CERM, 10uF, 50V, +/-10%, X7R, 1210	MuRata	GRM32ER71H106KA12L	1
12	C20	CAP, CERM, 1uF, 50V, +/-10%, X5R, 0603	MuRata	GRM188R61H105KAALD	1
13	C31	CAP, CERM, 10uF, 35V, +/-20%, X7R, 1210	Taiyo Yuden	GMK325AB7106MM-T	1
14	C36	CAP, CERM, 1uF, 50V, +/-10%, X7R, 0805	AVX	08055C105KAT2A	1
15	C37, C49, C54, C61	CAP, CERM, 1000pF, 50V, +/-20%, X7R, 0402	TDK	C1005X7R1H102M	4
16	C39, C50, C53, C59	CAP, CERM, 0.01uF, 50V, +/-10%, X7R, 0402	MuRata	GRM155R71H103KA88D	4
17	C40, C46, C51, C52, C55, C58, C60, C62	CAP, CERM, 0.1uF, 50V, +/-10%, X7R, 0603	Kemet	C0603C104K5RACTU	8
18	C41, C42	CAP, CERM, 22uF, 16V, +/-20%, X5R, 0805	MuRata	GRM21BR61C226ME44	2
19	C44	CAP, CERM, 10uF, 25V, +/-20%, X5R, 0603	TDK	C1608X5R1E106M080AC	1
20	C45, C56	CAP, CERM, 10uF, 16V, +/-20%, X5R, 0805	AVX	0805YD106MAT2A	2
21	C57	CAP, CERM, 22uF, 16V, +/-10%, X5R, 0805	TDK	C2012X5R1C226K125AC	1
22	C72	CAP, CERM, 0.1uF, 100V, +/-10%, X7R, 0603	MuRata	GRM188R72A104KA35D	1
23	C73	CAP, CERM, 3300pF, 100V, +/-5%, X7R, 0603	AVX	06031C332JAT2A	1
24	C79	CAP, CERM, 1000pF, 100V, +/-20%, X7R, 0603	AVX	06031C102MAT2A	1
25	C82, C85, C87, C92	CAP, CERM, 0.027uF, 50V, +/-5%, C0G/NP0, 1206	MuRata	GRM3195C1H273JA01D	4

26	C83	CAP, CERM, 1uF, 25V, +/-10%, X7R, 0603	TDK	C1608X7R1E105K080AB	1
27	C84, C89, C90, C95	CAP, CERM, 2700pF, 100V, +/-5%, X7R, 0603	AVX	06031C272JAT2A	4
28	C86	CAP, CERM, 1000pF, 100V, +/-5%, X7R, 0603	AVX	06031C102JAT2A	1
29	C88, C91	CAP, CERM, 10uF, 16V, +/-20%, X5R, 0603	Taiyo Yuden	EMK107BBJ106MA-T	2
30	C94	CAP, CERM, 1uF, 16V, +/-10%, X7R, 0603	Taiyo Yuden	EMK107B7105KA-T	1
31	D1, D6, D16	LED SmartLED Green 570NM	OSRAM	LG L29K-G2J1-24-Z	3
32	D3, D13	Diode, Schottky, 200V, 1A, PowerDI123	Diodes Inc.	DFLS1200-7	2
33	D4, D8	Diode, Zener, 18V, 1W, SOD-123	Panasonic	DZ2W18000L	2
34	D5, D10	Diode, P-N, 70V, 0.2A, SOT-323	Diodes Inc	DESD1P0RFW-7	2
35	D7, D9	TVS 18 VOLT 600 WATT BI-DIR SMB	Littelfuse Inc	SMBJ18CA	2
36	D11, D14, D15, D17	Diode, TVS, ARRAY, 19V, SOD323	Bourns Inc.	CDSOD323-T12C	4
37	D12	Diode, Schottky, 60V, 1A, SOD-123F	NXP Semiconductor	PMEG6010CEH,115	1
38	D21	Diode, Schottky, 45V, 0.1A, SOD-523	Diodes Inc.	SDM10U45-7-F	1
39	D23	DIODE ZENER 5.9V 1W PMDS	Rohm Semiconductor	PTZTE255.6B	1
40	FB1, FB2, FB3	FERRITE CHIP 1000 OHM 300MA 0603	TDK Corporation	MMZ1608Y102B	2
41	L1, L3, L4	FERRITE CHIP 1000 OHM 300MA 0603	TDK Corporation	MMZ1608B102C	4
42	J1, J4	Terminal Block, 2x1, 2.54mm, TH	TE Connectivity	282834-2	2
43	J2	Receptacle, 100mil, 4X1 TH	TE Connectivity	282834-4	1
44	J3	Terminal Block, 8x1, 2.54 mm, TH	Phoenix Contact	1725711	1
45	J5	Receptacle, 0.8mm, 25x2, SMT	Samtec	ERF8-025-05.0-L-DV-K-TR	1
46	L2	Inductor, Chip, ±10%	EPCOS INC.	B82422H1332K	1
47	Q1	MOSFET, N-CH, 60V, 50A, SON 5x6mm	Texas Instruments	CSD18537NQ5A	1
48	R1	RES, 9.42k ohm, 1%, 0.063W, 0402	Vishay-Dale	TNPW04029K42BEED	1
49	R2	RES, 110k ohm, 1%, 0.063W, 0402	Vishay-Dale	CRCW0402110KFKED	1
50	R3, R13	RES, 10 ohm, 5%, 0.25W, 1206	Vishay-Dale	CRCW120610R0JNEA	2
51	R4, R9	RES, 4.7k ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW06034K70JNEA	2
52	R5	RES, 27.0k ohm, 1%, 0.1W, 0603	Yageo America	RC0603FR-0727KL	1
53	R6, R8, R15, R28, R33, R41, R54	RES, 0 ohm, 5%, 0.063W, 0402	Vishay-Dale	CRCW04020000Z0ED	7
54	R10, R19, R38	RES, 10.0 ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW060310R0FKEA	3
55	R11, R18	RES, 15k ohm, 1/10W 0.1% 0603	Vishay-Dale	RT0603BRB0715KL	2
56	R16, R47, R48, R49, R51, R55, R60, R79, R80	RES, 10k ohm, 5%, 0.063W, 0402	Vishay-Dale	CRCW040210K0JNED	9
57	R17	RES, 0.02 ohm, 1%, 1W, 1206	Susumu Co Ltd	PRL1632-R020-F-T1	1
58	R20, R29, R35, R44	RES 100 OHM .4W 1% 0204 MELF	Vishay Beyschlag	MMA02040C1000FB300	4
59	R21, R30, R37, R50	RES, 200 ohm, 0.1%, 0.125W, 0805	Susumu Co Ltd	RG2012P-201-B-T5	4

60	R22	RES, 10k ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW060310K0JNEA	1
61	R23	RES, 95.3k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW060395K3FKEA	1
62	R24	RES, 56.0k ohm, 0.1%, 0.1W, 0603	Susumu Co Ltd	RG1608P-563-B-T5	1
63	R25, R36, R39, R53	RES, 1.00k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW06031K00FKEA	4
64	R26, R34, R43, R56	RES, 680 ohm, 5%, 0.063W, 0402	Vishay-Dale	CRCW0402680RJNED	4
65	R27	RES, 7.15k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW06037K15FKEA	1
66	R31, R32, R46, R52	RES, 1.10k ohm, 1%, 0.063W, 0402	Vishay-Dale	CRCW04021K10FKED	4
67	R40	RES, 1.2k ohm, 5%, 0.063W, 0402	Vishay-Dale	CRCW04021K20JNED	1
68	R42	RES, 0 ohm, 5%, 0.063W, 0402	Yageo America	RC0402JR-070RL	1
69	R45	RES, 49.9 ohm, 1%, 0.063W, 0402	Vishay-Dale	CRCW040249R9FKED	1
70	R57	RES, 4.87k ohm, 1%, 0.1W, 0603	Yageo America	RC0603FR-074K87L	1
71	R58	RES, 60.4k ohm, 0.1%, 0.1W, 0603	Yageo America	RT0603BRD0760K4L	1
72	R59	RES, 91.0k ohm, 1%, 0.1W, 0603	Yageo America	RC0603FR-0791KL	1
73	R61	RES, 189k ohm, 0.1%, 0.1W, 0603	Yageo America	RT0603BRD07189KL	1
74	R62	RES, 56.2k ohm, 0.1%, 0.1W, 0603	Yageo America	RT0603BRD0756K2L	1
75	R63, R64, R68, R70	RES 0.0 OHM .5W JUMP 1206 SMD	Vishay Dale	CRCW12060000Z0EAHP	4
76	R65	RES, 71.5k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW060371K5FKEA	1
77	R66	RES, 14.3k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW060314K3FKEA	1
78	R67, R69, R74, R78	RES, 10.0Meg ohm, 1%, 0.063W, 0402	Vishay-Dale	CRCW040210M0FKED	4
79	R71, R72	RES, 47k ohm, 5%, 0.063W, 0402	Vishay-Dale	CRCW040247K0JNED	2
80	R75	RES, 47.0k ohm, 0.1%, 0.1W, 0603	Yageo America	RT0603BRD0747KL	1
81	R76, R77	RES, 1.5k ohm, 5%, 0.063W, 0402	Vishay-Dale	CRCW04021K50JNED	2
82	T1	Transformer, 50uH, SMT	Würth Elektronik eiSos	750342178	1
83	U1	-36V, -200mA, Ultralow-Noise, Negative Linear Regulator	Texas Instruments	TPS7A3001DGNR	1
84	U2, U5	1-Channel, 16-Bit, Programmable Current/Voltage Output DAC for 4-20mA Current Loop Applications	Texas Instruments	DAC8760IPWP	2
85	U3	100V, 600mA Constant On-Time Synchronous Buck Regulator, DDA0008B	Texas Instruments	LM5017MRE/NOPB	1
86	U4, U7	Precision, Low Noise, Rail-to-Rail Output, 36V Zero-Drift Operational Amplifier	Texas Instruments	OPA188AIDBVT	2
87	U6	36-V, 1-A, 4.17-µVRMS, RF LDO Voltage Regulator, RGW0020A	Texas Instruments	TPS7A4700RGW	1
88	U8, U10, U14, U16	PHOTORELAY MOSFET 1A 4-SOP	Toshiba Semiconductor and Storage	TLP3123(F)	4
89	U9	Positive High Voltage Hot Swap / Inrush Current Controller with Power Limiting, 10-pin MSOP, Pb-Free	National Semiconductor	LM5069MM-2/NOPB	1

90	U11	IC, 60-V, 6-A IQ, 100-mA, LDO Voltage Regulator with Enable and Power-Good Functions	TI	TPS7A1650DGNR	1
91	U12	IC REG LDO 3.3V 0.15A SOT23-5	Texas Instruments	TPS70933DBVT	1
92	U13	16 bit 400KSPS 8 Channel SAR ADC	TI	ADS8688DBT	1
93	U15	4242-VPK Small-Footprint and Low-Power Quad Channels Digital Isolators, DBQ0016A	Texas Instruments	ISO7141CCDBQ	1
94	U17	IC, 8-Bit Shift Registers With 3-State Output Registers	TI	SN74HC595PW	1
95	U18	Low-Power Dual Digital Isolators, D0008A	Texas Instruments	ISO7421D	1
96	U19	IC, EEPROM, 2KBIT, 1MHZ, SOIC-8	Atmel	AT24C02C-SSHM-B	1

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